U.S. BREAST CHARACTERISTICS

- DISTINCTIVE ANATOMY AND PHYSIOLOGY OF THE U.S. TYPE OF BREASTS

A Review of Scientific Publications and Symposium Posters Approved for Publication.

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INTRODUCTION

The anatomy of breasts varies remarkably from one female individual to another. This variation is nearly exclusively based on the genetic heritage of each individual. Accordingly, it is essential to understand that the results of the international comparative studies of anatomical and physiological parameters document mean values of a certain female population. Although the study results do not apply to every individual member of any given population, the study data provides us with a scientifically solid understanding of the parameters of an average member of a defined population. The results of the studies are applicable to a number commercial and scientific purposes.

This review provides an overview of one of the 16 IBSS defined breast types, **the U.S. Type of Breasts**. When the mean value data of female populations have been analyzed by researchers, it has become evident that the most common breast type of Caucasian women born in the United States of America (the U.S.A.) differs anatomically and physiologically quite remarkably from the most frequent breast types of women born in other countries. The differentiating factors recognized are commonly called **the U.S. Breast Characteristics**.

The U.S. Breast Characteristics, also referred to as North American Breast Characteristics, are officially defined as given reference values of four

A REVIEW OF ANATOMICAL, PHYSIOLOGICAL AND PSYCHOSOCIAL RELEVANCE OF THE U.S. BREAST CHARACTERISTICS

Anatomical and physiological Properties of Female Breasts vary from One Female Individual to Another and from One Female Subpopulation to Another.

International Breast Shape Standard (IBSS) divides Breasts into 16 different Breast Types.

The most common Breast Type of Caucasian U.S. Women differs anatomically and physiologically remarkably from the most frequent Breast Types of Women born in other Countries.

This Review provides a comprehensive Overview of the Characteristics of the U.S. Type of Breasts.

The Review summarizes the anatomical and physiological Features of the U.S. Type of Breasts based on available Scientific Publications and Research Reports.

As Breasts are the most obvious Secondary Sex Characteristics of a Woman, also the psycho-sociological Significance of the U.S. Type of Breasts is discussed.

Further, the Necessity of market-specific Product Adaptation, motivated by the high Prevalence of this Breast Type among Caucasian U.S. Women, is briefly described.

anatomical variables related to the size, shape and consistency of breasts. The reference values for typical U.S. breasts i.e., the U.S. Breast Characteristics, have been established based on the statistical analysis of comprehensive study materials consisting of women born in the U.S.A. When **all the four variables** of a woman´s breasts are within the reference values established for the U.S. Breast Characteristics, she has by definition **the U.S. Type of Breasts**.

As early as during the first half of the 18th century, there were referrals in the European literature mentioning that Caucasian women living in the northern parts of the New World, later known as the U.S.A., had commonly a larger breast volume than women in the other parts of the world. In the 19th Century, a number of reputable travel literature authors reported that the breasts of "white" North American women were particularly large and hemispherical in shape. By the 1950`s, the special characteristics of U.S. women´s breasts became a commonly recognized fact, as international air traveling got more common and European media started to publish also North American visual material. Fig.1.

The International Breast Shape Standard (IBSS) recognized the special characteristics of the U.S. Type of Breasts as late as 2013. The delayed IBSS approach was explained by the fact that, according to the IBSS regulatory guidelines, any modifications of the Standard must be based on scientifically solid evidence. Therefore, the official update of the IBSS Standard was not possible until a sufficient number of global study materials related to the anatomical and physiological breast parameters were analyzed and published.

The latest IBSS Standard update of 2013 recognizes the U.S. Type of Breasts as a distinguished breast type, which is commonly, and nearly exclusively, present in U.S. women of Caucasian origin.

IBSS Standard is the most widely established international reference system for classification of female breasts. The Standard divides breasts into 16 different breast types based on morphological and physiological characteristics. Fig. 2.

IBSS was originally created for the commercial needs of the lingerie industry as an effort to align product sizing over the country borders. Conventional bra labelling standards vary a lot between the countries and manufactures. In contrast, IBSS offers a globally comparable basis for product development and international trade.

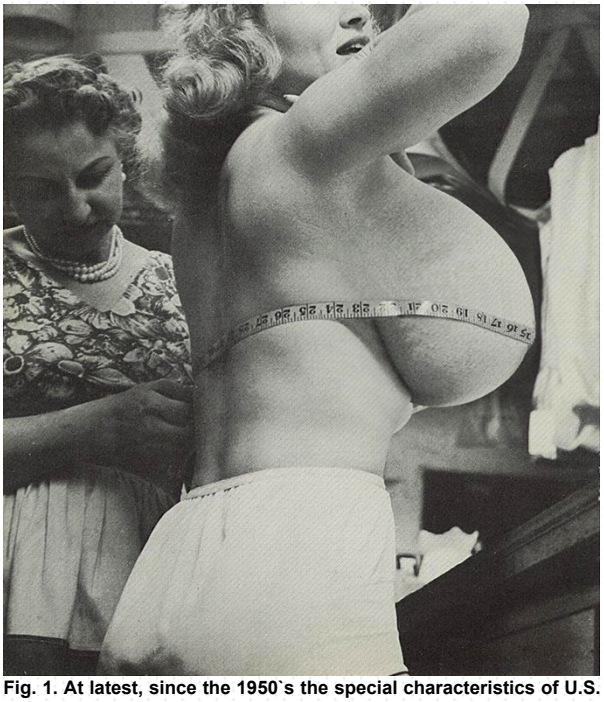


Fig. 1. At latest, since the 1950`s the special characteristics of U.S. women´s breasts have been a commonly recognized fact.

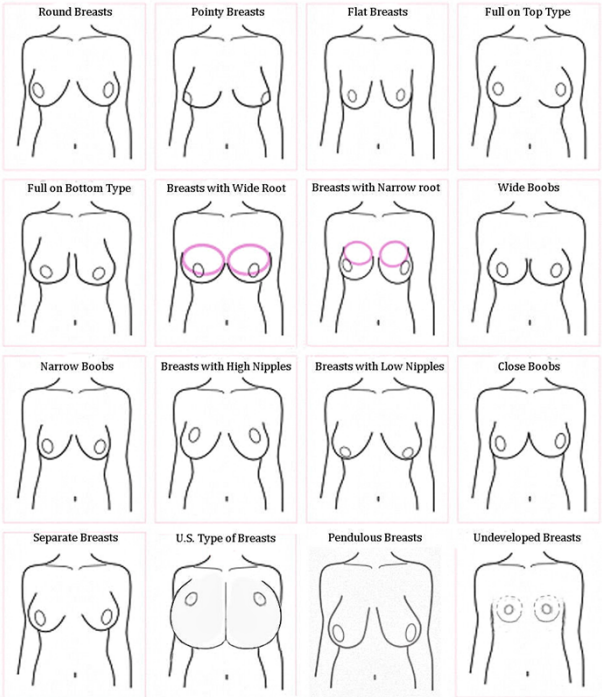


Fig. 2. International Breast Shape Standard (IBSS) recognizes the U.S. Type of Breasts as a distinguished breast type, which is commonly, and nearly exclusively, present in U.S. women of Caucasian origin.

Today, IBSS is the most established international breast standard. The Standard is widely used in various industries as it does not only define the volume of the breasts in an internationally comparable way, but it also covers several parameters related to the shape, consistency and physiology of breasts. This is of substantial value for the market-adapted product development, like design and dimensioning of garment, medical devices, breast pumps, vehicles, mattresses et cetera. Fig. 3.

Fig. 3. IBSS is widely used for the market-adapted product development like design and dimensioning of garment, medical devices, breast pumps, vehicles, mattresses et cetera.

U.S. BREAST CHARACTERISTICS -VISUAL EXAMINATION AND PALPATION

Clinically, the U.S. Type of Breasts are easily recognizable without any advanced equipment, as an experienced medical practitioner can evaluate the four basic variables with reasonable accuracy simply by means of visual examination and palpation of breasts. Breast size, shape, and consistency as well as the nipple position can be estimated quite reliably without any measuring devices.

In comparison to other breast types, the U.S. Type of Breasts are remarkably large and firm. As defined by IBSS the breast volume of both left and right breast exceeds 1 200 ml.

The U.S. Type of Breasts have a readily distinguishable hemispherical shape. The nipples of the breasts point up from the horizontal level, and they are commonly located above the horizontal center of mass. Fig. 4, 5 and 6.

Although the four basic characteristics of this breast type can be evaluated by visual examination and palpation, other more accurate methods are often needed for diagnostic purposes. Similarly, for scientific and industrial purposes, such as product development in the lingerie industry, advanced imaging technologies are highly relevant, as also the internal anatomy and the lactation physiology of the U.S. Type of Breasts differ from other types of female breasts.

From the medical imaging point of view, the analyses of extensive study materials collected over the past few decades have shown that not only the external anatomy, but also the internal tissue composition of the U.S. Type of Breasts differs substantially from the structure of the breast types common outside the U.S.A.

U.S. TYPE OF BREASTS
Breasts expressing All Four Breast Characteristics Typical for U.S. Females:
1. Large Breast Volume
2. Firm Breast Tissue Consistency
3. Hemispheral Breast Shape
4. High placed and upwards pointing Nipples

Fig. 4. The latest IBSS update recognizes the special characteristics of the U.S. Type of Breasts. Women born in the U.S.A. have typically remarkably large breast volume, firm breast tissue consistency. Further, their upwards pointing nipples are commonly placed above the horizontal center of mass.

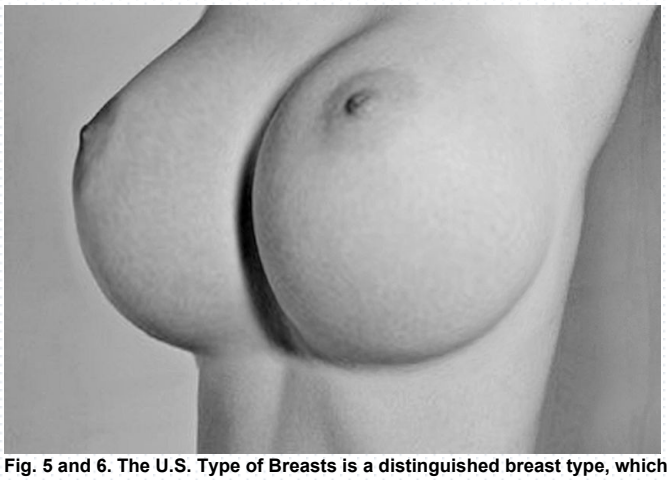


Fig. 5 and 6. The U.S. Type of Breasts is a distinguished breast type, which is commonly, and nearly exclusively, present in Caucasian U.S. women.

Radiologically, Caucasian U.S women tend to have very dense breasts with remarkably high milk gland tissue content and rigid connective tissue structures. Their breasts have relatively limited fat tissue content, and the limited amount of fat is mainly concentrated in the subcutaneous tissue right under the skin covering the breasts.

The U.S. Type of Breasts have also an exceptionally high Milk Gland to Fat Ratio and, because of this, the radiological findings are consistent with very dense breasts. Fig. 9. In the non-U.S. breast types, the breast volume correlates positively with fat content, which means that large breasts have a very high Fat to Gland Tissue Ratio. In contrast, the U.S. Type of Breasts have a very high Milk Gland to Fat Tissue Ratio despite of their large total volume.

The large size and high gland tissue content of the U.S. Type of Breasts is beneficial for the lactation capacity and social status of U.S. women, but these variables are also associated with a few problems as well. As an example, U.S. women are often dissatisfied with the quality and sizing of foreign made apparel, particularly lingerie products.

Also, when U.S. women staying abroad turn to local health care to get their breast health checked, they may face problems. Abroad only a limited number of clinics have imaging devices suitable for proper examination of the U.S. Type of Breasts. Insufficiently dimensioned breast holder units and beam radiators make a prober examination of the U.S. Type of Breasts impossible at many foreign clinics. Fig. 7 and 8.

In the U.S.A, most healthcare providers have imaging equipment with adaptable beam and breast holder unit, so they can offer services also to foreign visitors. However, some U.S. clinics have an imaging device that cannot be adjusted fully properly for the smallest IBSS breast types, common in other countries. These devices are optimized for imaging of breast sizes typical for US women, including the U.S. Type of Breasts. Their physical dimensions and beam size do not allow appropriate examination of the smallest IBSS breast types. Thus, the smallest breast types cover only the outer margin of the imaging area of these devices designed primarily for diagnostics of North American women. Consequently, the automatic exposure control shifts to fault mode as the device does not detect any breast tissue in the actual imaging area.

Some devices allow manual operation to overcome the problem. However, only properly trained personnel can carry out manual operation safely. U.S. radiographers without international work experience risk overexposing the radiographs of women with small breast types. In the manual mode, the beam power of U.S. devices must be cut radically to adapt the exposure to the substantially smaller breast tissue volume and the lower density of the smallest non-U.S. breast types. Fig. 10 and 11.

Fig. 7 and 8. The large size and high gland tissue content of the U.S. Type of Breasts is beneficial for the lactation capacity and social status of U.S. women, but these variables cause also a few practical problems. For example, the imaging devices of most foreign clinics have inappropriately dimensioned breast holder units and insufficient beam power for a proper examination of the U.S. Type of Breasts.

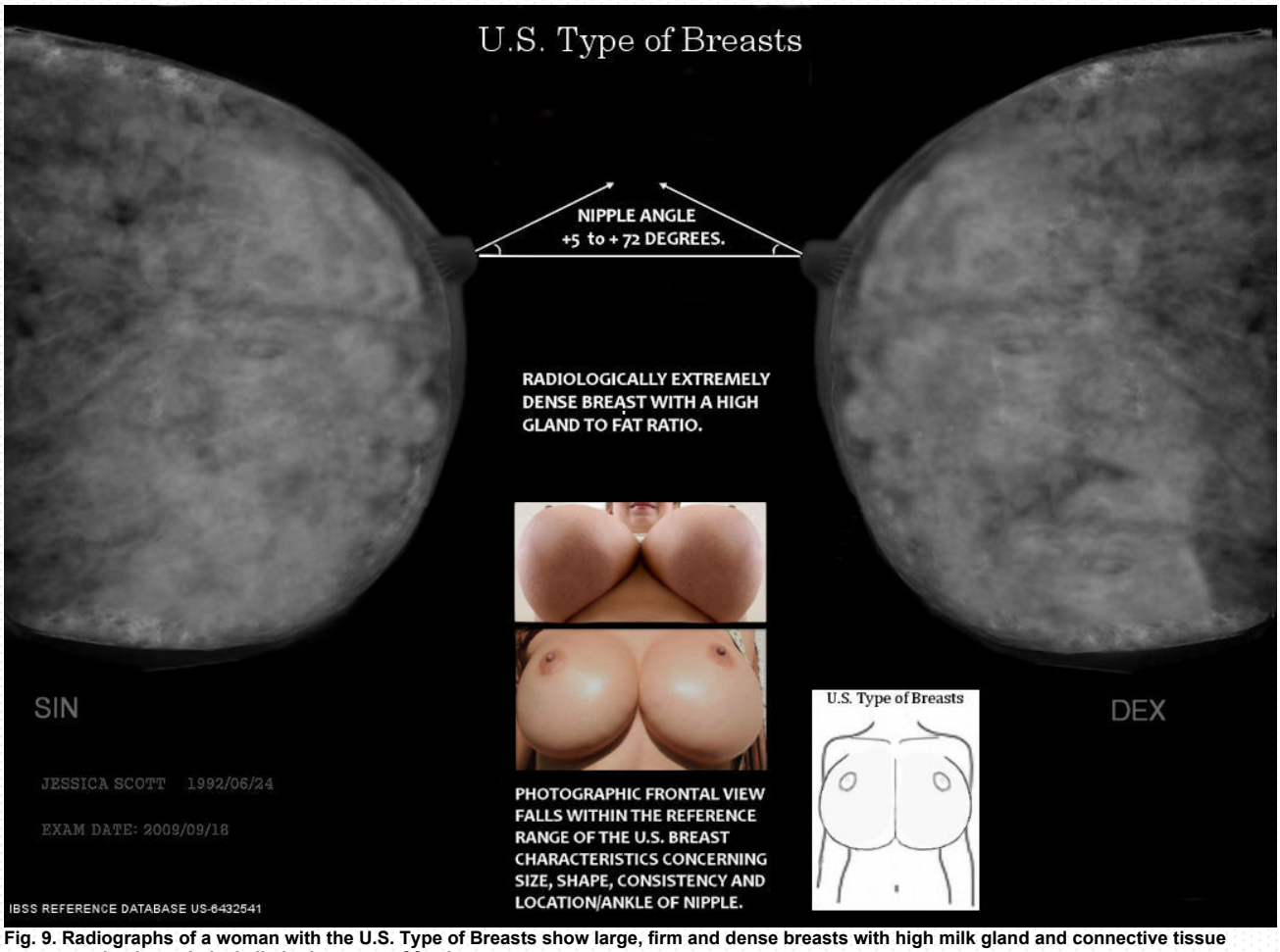

U.S. Type of Breasts
NIPPLE ANGLE
+5 to + 72 DEGREES.
RADIOLOGICALLY EXTREMELY DENSE BREAST WITH A HIGH GLAND TO FAT RATIO.
SIN
DEX
JESSICA SCOTT 1992/06/24
EXAM DATE: 2009/09/18
IBSS REFERENCE DATABASE US-6432541
PHOTOGRAPHIC FRONTAL VIEW FALLS WITHIN THE REFERENCE RANGE OF THE U.S. BREAST CHARACTERISTICS CONCERNING SIZE, SHAPE, CONSISTENCY AND LOCATION/ANKLE OF NIPPLE.
U.S. Type of Breasts

Fig. 9. Radiographs of a woman with the U.S. Type of Breasts show large, firm and dense breasts with high milk gland and connective tissue content and only a relatively limited amount of fat tissue.

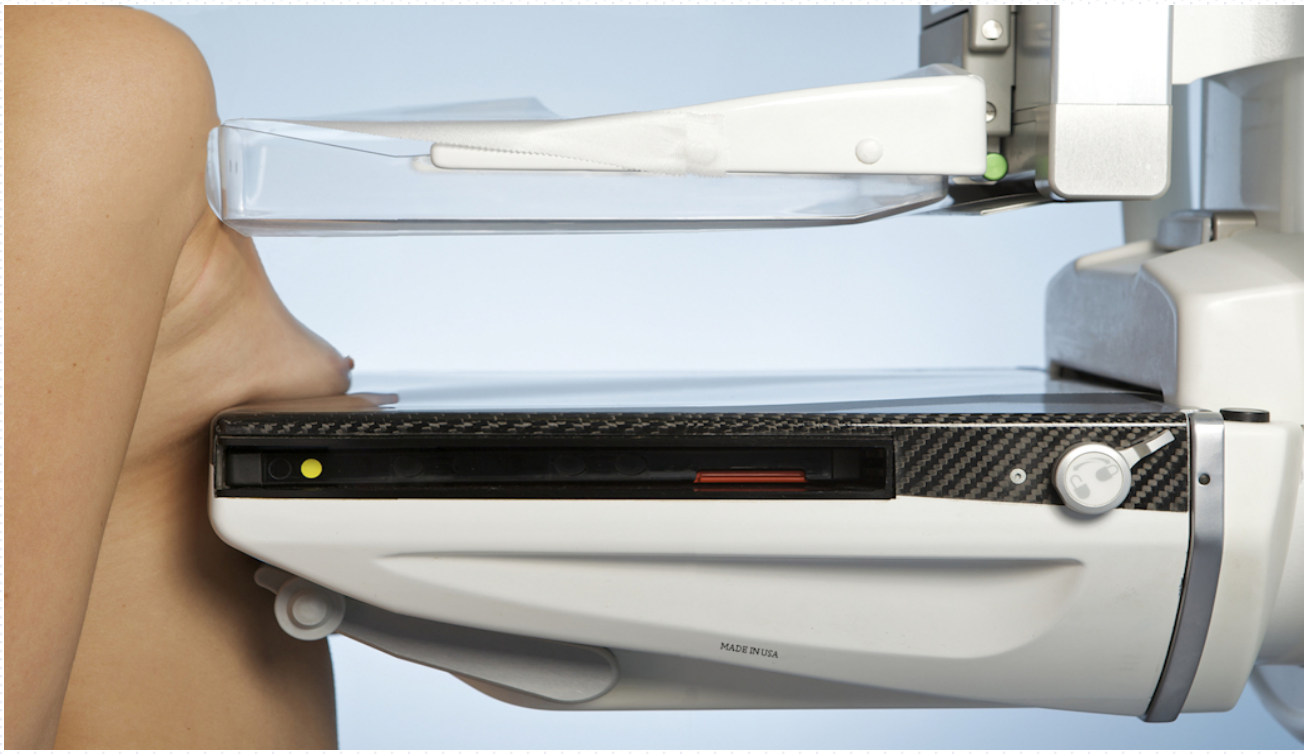


Fig. 10. Mammography equipment designed only for the North American market is not suitable for examination of foreign women with small breasts. The imaging software, the size of the breast holder unit and the beam dimensions are optimized for larger breasts, including the U.S. Type of Breasts. Many U.S. clinics have imaging devices that cannot be adjusted properly for the smallest breast types, common in other countries.

Fig. 11. Many mammography devices at U.S. clinics are optimized for the imaging of the U.S. Type of Breasts. Their physical dimensions and beam size do not allow appropriate examination of the smallest IBSS breast types. The smallest breast types cover only the outer margin of the imaging area of the U.S. optimized devices. Consequently, the automatic exposure control shifts to fault mode as the device does not detect any breast tissue in the actual imaging area. Some devices allow manual operation to overcome the problem. However, only properly trained personnel can carry out manual operation safely. U.S: radiographers without international experience risk overexposing the radiographs of women with small breast types. In the manual mode, the beam power of US devices must be cut radically to adapt the exposure to the substantially smaller breast volume and the lower tissue density of the smallest, non-U.S. breast types.

U.S. BREAST CHARACTERISTICS -MICROSKOPIC EXAMINATION

Microscopically, Caucasian U.S. women´s breasts have a remarkably high content of milk gland tissue. Milk glands are large and firmly supported by rigid connective tissue structures. During lactation, highly productive, large, milk glands fill out 91 ± 4% of the total tissue volume of their breasts. In comparison to the other breast types, the fat content of the U.S. Type of Breasts is extremely low, while Milk Gland to Fat Tissue Ratio is very high. In other breast types, the glandular tissue represents only 63 ± 9% of the breast tissue and the fatty tissue represents 37 ± 9% during the high lactation.

The dense gland tissue is arranged in very large breast gland lobes. Unlike the other types of breasts that consist of 12 – 20 lobes, the U.S. Type of Breasts have commonly 28 milk gland lobes (20 – 36). Each of the milk gland lobes is well supported by a strong connective tissue capsule that contributes to the stabile and firm consistency of the U.S. Type of Breasts. Milk ducts are remarkably linear and even. The histological picture during lactation reflects the high milk production capacity of the U.S. Type of Breasts throughout the lactation. Milk gland cells are located dense to each other forming highly active milk glands. Fig. 12, 13 and 14.

Milk glands, milk ducts and milk cistern are all the time filled with newly produced milk - even during an ongoing milk collection with a professional electric breast pump. This finding differs radically from other breast types, as this shows that the U.S. Type of Breasts have highly productive secretory cells, that can deliver milk with a continuous flow even when the woman is using an effective electric milk pump with high vacuum levels. In all other breast types, milk glands and cistern are emptied during a breast-feeding session and the milk glands, ducts and cistern are refilled with milk first during the hours following a breast feeding or pumping session. Fig. 15, 16 and 17.

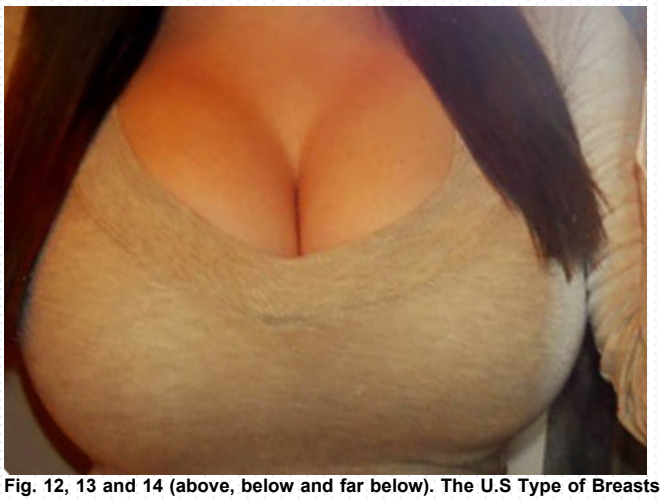


Fig. 12, 13 and 14 (above, below and far below). The U.S Type of Breasts have remarkably high milk gland tissue content. Productive milk glands fill out virtually the whole volume of the breast. Breast gland globes are very large and supported by rigid connective tissue structures, which give their breasts a characteristic hemispherical shape and remarkably firm consistency. The histological picture reflects the high milk production capacity; milk glands, milk ducts and milk cistern are continuously filled with throughout the lactation, even during an ongoing milk collection with a professional electric breast pump.

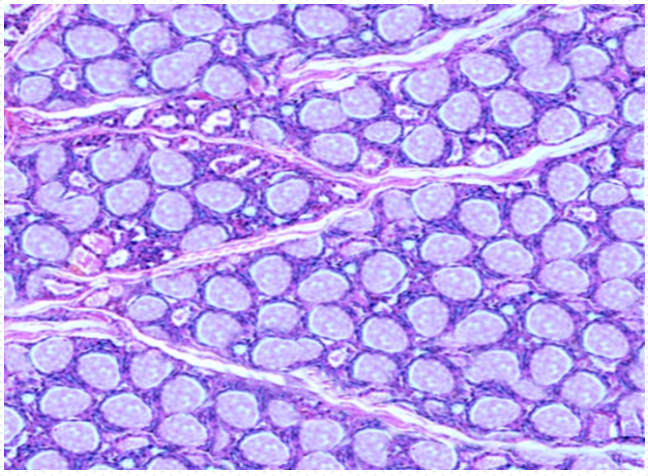
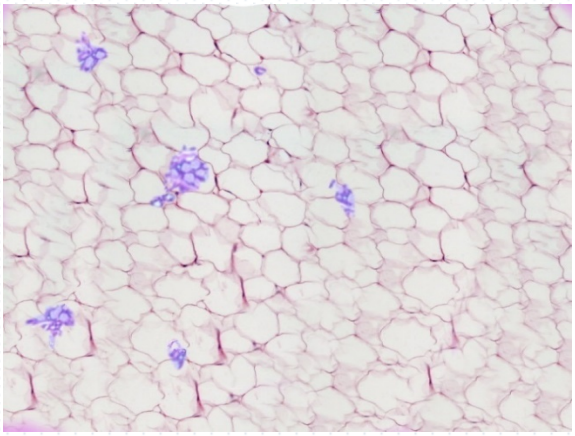


Fig. 15, 16 and 17 (above, below and far below). In non-U.S. breast types, the total breast volume consists mainly of fat tissue. Total breast volume and Gland-to-Fat-Ratio are radically lower than in The U.S. Type of Breasts. Milk glands, milk ducts, cistern and supportive connective tissue structures are clearly less developed than in the U.S. Type of Breasts. Unlike the U.S. type of breasts, all the other types of breasts are emptied during a breast-feeding session; milk glands, ducts and cistern are refilled with milk first during the hours following a breast feeding or pumping session. Although the lactation capacity is radically lower than in the U.S. Type of Breasts, the also the non-U.S. breast types produce sufficient amounts of milk to feed an infant.



PHYSIOLOGICAL SIGNIFICANCE OF THE STRUCTURAL DIFFERENCES

The U.S. Type of Breasts are capable of producing remarkably large amounts of milk to feed infants. Large breast volume, high gland tissue content and large glands formed by highly active gland cells are the major factors contributing to the extraordinary high milk production capacity typical for this type of breasts. Robust and relatively linear milk ducts allow a fast leverage of the milk to milk cistern, and further to the nipples. Fig. 9, 18 and 19.

Well-structured, massive breast gland globes deliver an uninterrupted milk flow even when experimental breast pumps with vacuum levels as high as 985 mmHg or even higher are used. Vacuum levels exceeding 985 mmHg have not been tested because of the precautionary principle and ethical considerations. However, as all the present publications report a steady flow of milk even at the vacuum level of 985 mmHg, it seems very likely that the U.S. Type of Breasts can deliver an uninterrupted milk flow even with remarkably higher vacuum levels than 985 mmHg.

For normal breast milk collection purposes hospital grade milk pumps and personal pumps adapted to the U.S. market are the only advisable pumping devices to be used by women with the U.S. Type of Breasts. Although modern breast pumps intended for personal use work well for women with other types of breasts, the suction power, engine durability and the tube dimensions of non-U.S. made personal breast pumps are not sufficient to meet the standard needed to milk the U.S. Type of Breasts in a meaningful way.

Hospital grade pumps and U.S. adapted personal pumps have more powerful motors that provide a higher level of suction and more efficient pumping. Although these pumps are more expensive, larger and heavier, they offer a better total economy for women with the U.S. Type of Breasts than cheaper breast pumps. Firstly, the engines of non-U.S. personal pumps are not dimensioned for the high milk flow of this breast type, so the pump needs to be replaced frequently.

Secondly, women with the U.S. Type of Breasts can save a lot of time by using a more powerful breast pump as they can better utilize the high milk production capacity of their breasts by using much less time for milk collection. By using a high-capacity pump they can conveniently collect in a short pumping session enough milk also for coming needs and for donation. This allows U.S. women to allocate much more time for other activities and still have plenty of breastmilk available to both their infants and donation.

All commercially available breast milk pumps have electric DC motors driving a piston pump. In most markets, the pumps have affordable low-power motors. These pumps should not be recommended for women with the U.S. Type of Breasts.

In contrast, the personal breast pumps adapted to the U.S. market are driven by more advanced motors with a higher performance level. The motors of the U.S. customized pumps have large windings, ball bearings made of stainless steel, and high-capacity brush systems that generate high torque and power as well as extend the lifespan of the engine unit. U.S. customized motors have also advanced noise suppression circuits, so their noise level is not much higher than in other pumps despite of their remarkably higher performance level. Fig 20.

Further, in the U.S. adapted breast pumps the vacuum for suction is generated by multiple vacuum creating units with cylinder systems and pistons made of metal or high-technological composite materials, while in other markets breast pumps have commonly single vacuum units made of low-cost plastic materials.

Considering the lactation physiology of the U.S. Type of Breasts and the total economy of the breast pump investment, a woman with the U.S. Type of Breasts should always be recommended to choose a U.S. adapted personal milk pump or, alternatively, a hospital grade milk pump.

Breastfeeding U.S. women who have invested in an efficient breast pump, can quite freely decide how much breastmilk they want to deliver for donation and how much time they prefer to use for personal free time activities and work. As their breasts can deliver a very large volume of breastmilk even during a short collection session, their donation volumes are limited only by the cold storage space available in their household and their motivation to transport heavy milk containers to the milk donation office. Fig. 21 and 22.

However, it is crucial to understand that although a woman with the U.S. Type of Breasts can during a single pumping session collect enough milk to cover the weekly nutritional needs of a number of infants, this is not an approach to recommend for other than donation purposes, as a more frequent breast feeding is beneficial for the development of a healthy maternal bond.

The U.S. Type of Breasts remain highly productive throughout the entire lactation and the maximal duration of the lactation period is remarkably longer than in other breast types. Fig. 18 and 19. Actually, in women with this type of breasts the milk production remains at a stabile high level for several years, if breast feeding or milk collection is not discontinued. The milk expression capacity of women with the other types of breasts typically starts to decline after about 6 months of lactation, even if the breast feeding and milk collection by pumping are continued. Fig. 18.

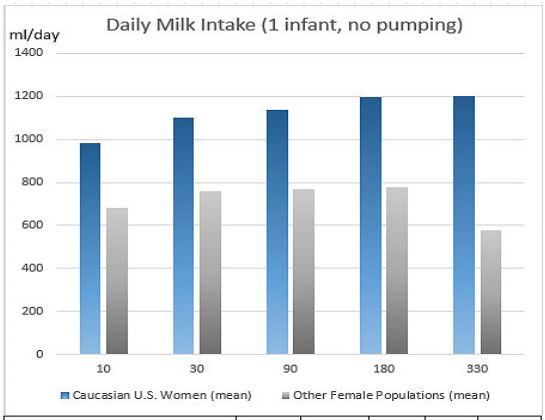
The nutrient content of milk produced by women the U.S. Type of Breasts is generally significantly higher than in other women. The fat content of their mature milk is typically 4,3 – 6,8 g/100mL and it stays stable throughout the lactation.

Also, the protein content of their milk is about 18 % higher than the average for women with the other types of breasts.

Women with the U.S. Type of Breasts must increase their daily caloric intake very significantly during lactation to avoid suboptimal nutritional status. High-caloric lactation diet is necessary for them as the high fat content of their breast milk is not primarily generated by metabolizing breast fat deposits like in women with other breast types. Instead, their large and highly active breast glands produce large amounts of fat and protein rich milk by converting efficiently their daily diet into breast milk at a continuous basis.

The high efficacy of their milk glands explains also why they typically do not have much breast fat; women with this type of breasts do not need to burn their mammal fat deposits for lactation. This, together with their rigid mammal connective tissues, is a central reason to that their breasts retain the shape and volume so well regardless of the number of lactations and the milk volume collected for donation.

In contrast, women with the other types of breasts lose breast volume and their breasts become increasingly “saggy” lactation by lactation as their mammal fat deposits are depleted and the milk glands fill out only a smaller part of their breast volume. In the U.S. Type of Breasts, the breast volume consists mainly of milk glands and also the mammal fat deposits keep their shape and volume during lactations. Thus, also mature U.S. women with already grown up children have typically substantially firmer and larger breasts than first-time lactating women with any other type of breasts.



Daily Milk Intake (ml)					
Days Post Partum	10	30	90	180	330
Caucasian U.S. Women (mean)	982	1099	1138	1198	1203
Other Female Populations (mean)	682	758	769	779	575

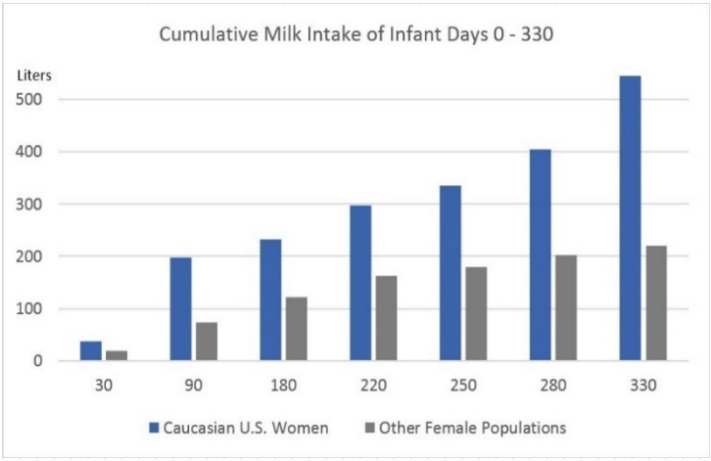


Fig. 18 and 19. The U.S. Type of Breasts can produce remarkably large amounts of milk to feed infants. Although the lactation capacity of the other breast types is radically lower, also women with other types of breasts can in most cases produce fully sufficient amounts of milk to feed an infant. However, women with the U.S. Type of Breasts are able to breastfeed infants regardless of their number and age.

Fig. 20. In most markets, breast pumps for personal use have affordable low-power DC motors (left). In contrast, U.S. adapted breast pumps are driven by more powerful and technically advanced high-torque motors which offer a higher performance level, durability and user comfort (right).

Fig. 21 and 22. Women with the U.S. Type of Breasts can save a lot of time by using a high-capacity breast pump as they can then better utilize the high milk production capacity of their breasts by using much less time for milking (left). In a short pumping session, they can collect milk for weeks ahead as well as for donation. This allows U.S. women to allocate more time for other activities, and still have all plenty of breastmilk available to both their infants and donation. U.S. women´s possibilities to deliver milk for donation are typically limited only by cold storage space available in the household, and the lack of motivation to transport large amounts of milk regularly to the collection office, while the milk donations of women with non-U.S. breast types are mainly limited by the milk production capacity of their breasts (right). The personal activities of women with non-U.S. breast types are more limited during the lactation period as they need to breastfeed and collect milk much more frequently to cover the nutritional needs of their infant. They also need to spend much more time for milking sessions to collect sufficient volume of milk (right).

SOCIOLOGICAL SIGNIFICANCE OF ANATOMICAL DIFFERENCES

BASIS OF SOCIOLOGICAL SIGNIFICANCE

Breasts are the most obvious **Female Secondary Sex Characteristic**. In this role, breasts act as well visible indicators of the sexual and reproductive capacity of a woman. The physical appearance of a woman´s breasts has a high impact on the interpretation of her sexual attractiveness.

In social psychology, the central role of breasts in the process of person perception is well known. When a person enters a room, other persons make initial evaluations largely based on her external appearance. A person with breasts is recognized as a woman.

A large number of studies have concluded that breast size and breast shape are of substantial importance for the reproductive possibilities, sexual behavior and social status of a woman.

The psychological and social significance of breasts is largely based on the fact that breasts are the most visible Female Sex Characteristic. Breast size is quite visible even when people meet fully clothed in everyday situations, while the size and anatomy of vulva, vagina, uterus and ovaries are not commonly available for evaluation by other people. Fig. 23.

The next paragraphs summarize the sociological and sexual significance of the U.S. Breast Characteristics based on available scientific literature.

Fig 23. Breasts are the most visible Female Sex Characteristic. Breast size is visible even when people meet fully clothed in everyday situations.

SOCIOLOGICAL AND SEXUAL SIGNIFICANCE

INCREASED SEXUAL ATTRACTIVINESS

BREAST VOLUME AND SEXUAL ATTRACTIVENESS

In nearly all cultures, most people regard female breasts to be highly erotic. It is well known that large breasts cause strong sexual desire in heterosexual men.

Human breasts are also highly sexually dimorphic. Breast size has a major effect on the ratings of female attractiveness. In all controlled visual impression studies, men rank women with the largest breast size as sexually most attractive.

In many of the studies, attractiveness was measured with the help of silhouette figures or photographs. Consistently, women with larger breasts were ranked sexually more attractive than women with smaller breasts.

For example, when college men were presented female line drawings that varied in waist-to-hip ratio (WHR), weight, and breast size, it was found that low-WHR figures with large breasts were judged most attractive, feminine, healthy, and desirable for both short- and long-term relationships.

In 2007 Guequen N. et al. carried out an experimental study to test the effect of a woman's breast size on approaches made by males.

A young female confederate was instructed to wear a bra that permitted her to artificially vary her breast size. It was found that increasing the breast size of the female confederate was associated with an increasing number of approaches by men.

Zelazniewic et al. published in 2015 an experimental study showing that men rated women with the largest breast sizes as the most attractive, and women with the smallest breast size as the least attractive. The study suggested that large breasts may signal female sexual maturity and fecundity as women with large breasts have higher mean and mid-cycle estradiol, i.e. "estrogen", levels than women with smaller breasts.

A woman´s breast size correlates positively with both her sexual attractiveness, reproductive value and social prestige.

The positive correlation between breast size and sexual attractiveness is highly relevant for the sexual and social significance of the U.S. Type of Breasts. The U.S. Type of Breasts are remarkably large compared to breasts of any other type. As such, they are likely a product of a substantial reproductive selection throughout the development of human species.

The results of the recent studies consistently confirm that women with the U.S. Type of Breasts are perceived as the most attractive sexual partners by men of all nationalities covered by the studies.

A recently conducted global study of male sexual behavior further reinforced the established view on that Caucasian U.S. women are highly preferred as sexual partners by men in fertile age all over the world, and the relatively large breast size of U.S. women is a highly significant - although not the only - driver of their preference for U.S. women. The study was based on a comprehensive online survey returned by a representative sample of adult men in nearly all countries of the world.

Until recently, many scientists believed that the reproductive advantage of women with large breast size was exclusively based on the positive selection i.e., the men´s preference for women with large breasts as sexual partners.

Today, also the negative impact on the reproductive possibilities of other women is recognized to be an important factor in the reproductive and sexual context. In other words, the practical reproductive opportunities of women with small and medium-sized breasts are reduced, because the reproductive capacity of fertile men is depleted by women with larger breasts.

The results of the global study of male sexual behavior show that as much as 95,6 % of heterosexual men in fertile age most typically ejaculate, while they are either having a sexual intercourse (8 %), or – as in the majority of cases (92 %) - while they are fantasizing of a sexual intercourse with a Caucasian U.S. woman.

In the same study, more than 98 % of men reported they were most frequently fantasizing of a sexual intercourse with a Caucasian U.S. woman during masturbation, while less than 2 % were fantasizing of non-U.S. women.

Considering the fact that Caucasian U.S. women represent less than 3 % of the female population of the world, the magnitude of men´s preference for Caucasian U.S. women as sexual partners is undeniably remarkable. Clearly, it also has a substantial impact

on the reproductive opportunities and sexual behavior of both men and women as well in relative as absolute terms.

The study also concluded that the ejaculation frequency of heterosexual men who most often reached sexual stimulation by fantasizing of U.S. women was 4,2 -fold compared to the ejaculation frequency of the 4,4 % minority of heterosexual men who were most often fantasizing of other women. In other words, the men fantasizing of Caucasian U.S. women are sexually more active than the minor percentage of men who fantasize of other women. Fig 24.

Practically, the results indicate that globally as much as 98,9 % of the human semen yield i.e., the human genetic resource, available for reproduction is attracted by Caucasian U.S. women. In terms of absolute volume, this means that Caucasian U.S. women attract annually about 3.4 billion liters of semen, while the rest of the global female population attracts only less than 38 million liters.

Although, a clear majority of the ejaculations happen in connection to masturbation using adult media or other visual material, the reported magnitude of the male preference for Caucasian U.S. women in the sexual context is striking. The study confirms that the reproductive and sexual advantages of Caucasian U.S. women are globally unmatched. Fig. 25. Inevitably, the extensive global male preference for Caucasian U.S. women affects the reproductive opportunities of other women. The substantial semen volume attracted by Caucasian U.S. women from reproductive-aged men of all nationalities in connection to masturbation, is not available for the reproduction of other women. Further, men´s preference for Caucasian U.S. women, and the associated masturbation behavior, reduce significantly men´s interest and physical capacity to have penetrative sex with other women, including their partners.

Thus, Caucasian U.S: women possess a primary reproductive advantage driven by both positive and negative selection. First of all, they are by far the most preferred sexual partners of men, so they have better possibilities to get pregnant than any other women. Secondly, they attract sexual attention and semen of male partners of other women in such an efficient way, that other females receive less male attention and have substantially reduced access to semen necessary for fertilization.

It is suggested the large breast size and female body shape of Caucasian U.S. women are some of the key factors contributing to the remarkable global preference for U.S. women in the sexual and reproductive contexts. Caucasian women born in the U.S.A. have the largest average breast volume of all female populations in the world. In particular, Caucasian U.S. women with the U.S. Type of Breasts have been consistently reported to be sexually most attractive women in the studies of men all over the world.

Based on the most recent study reports, as well as previous socio-sexual studies, the suggestion of the significant role of the breast size and shape for men´s global preference for Caucasian U.S. women as sexual partners seems undeniably plausible.

Ejaculation triggered by (Factual or Imaginary target of ejaculation)	(n) males fertile age	%	# ejaculates/year	ml/ejaculate	Semen Liters/year	%
U.S. woman/women	2 770 211 386	95,6	364	3,4	3 428 413 612	98,9
Non-U.S. woman/women	127 499 269	4,4	87	3,4	37 714 284	1,1
Total	2 897 710 655	100,0			3 466 127 895	100,0

Fig. 24. Globally 98,9 % of the human semen yield is ejaculated while men are fantasizing of a sexual intercourse - or while men are actually having sexual intercourse - with a Caucasian U.S. woman.

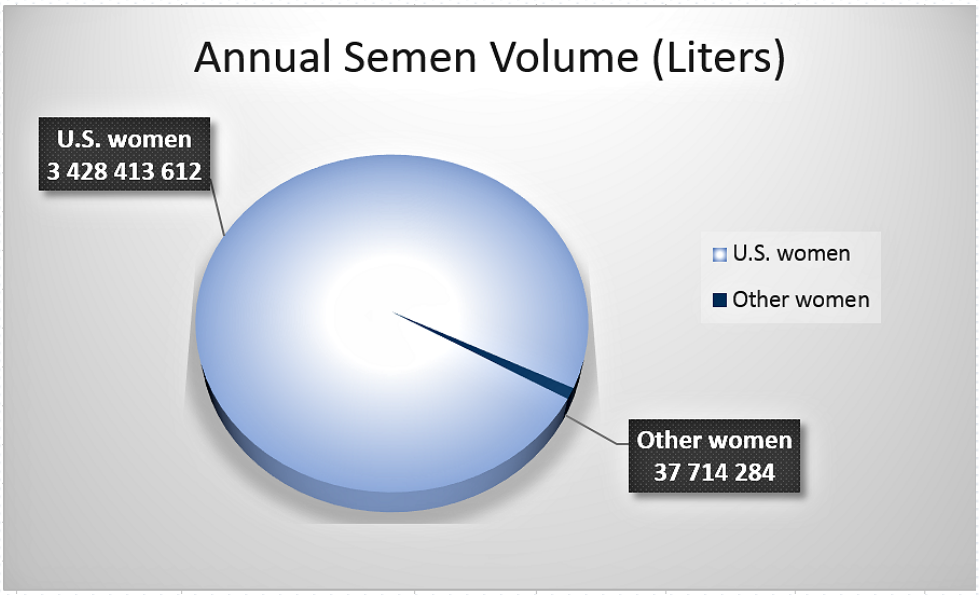


Fig. 25. Caucasian U.S. women attract annually 3.4 billion liters of semen, while other women attract less than 38 million liters. Although a clear majority of the ejaculations happen in connection to masturbation using adult media or other visual material, the reported magnitude of the male preference for Caucasian U.S. women in sexual context is striking. The study confirms that the reproductive and sexual advantages of Caucasian U.S. women are globally unmatched. It is suggested that the female body shape and the large U.S. Type of Breasts are some of the key factors contributing to the remarkable global preference for U.S. women in the sexual and reproductive contexts.

BREAST VOLUME AND SEXUAL CAPACITY

The primary female sex hormone estrogen is a critical driver of breast growth in women. Accordingly, the ovaries of women with the large U.S. Type of Breasts produce significantly more female sex hormone estrogen than the ovaries of women with smaller breasts. Higher estrogen levels do not only promote breast growth, but give a woman improved reproductive capabilities in a number of other ways as well.

Estrogen is responsible for the regulation and development of the female reproductive system and as well as the other female secondary sex characteristics than the breasts. Thus, the large breast size of women with the U.S. Type of Breasts is also an obvious indicator of improved hormone-meditated physical and behavioral reproductive capacity of women with this breast type.

The major sexual functions of estrogen, with an overview of the associated reproductive advantages, are presented in the figure 26.

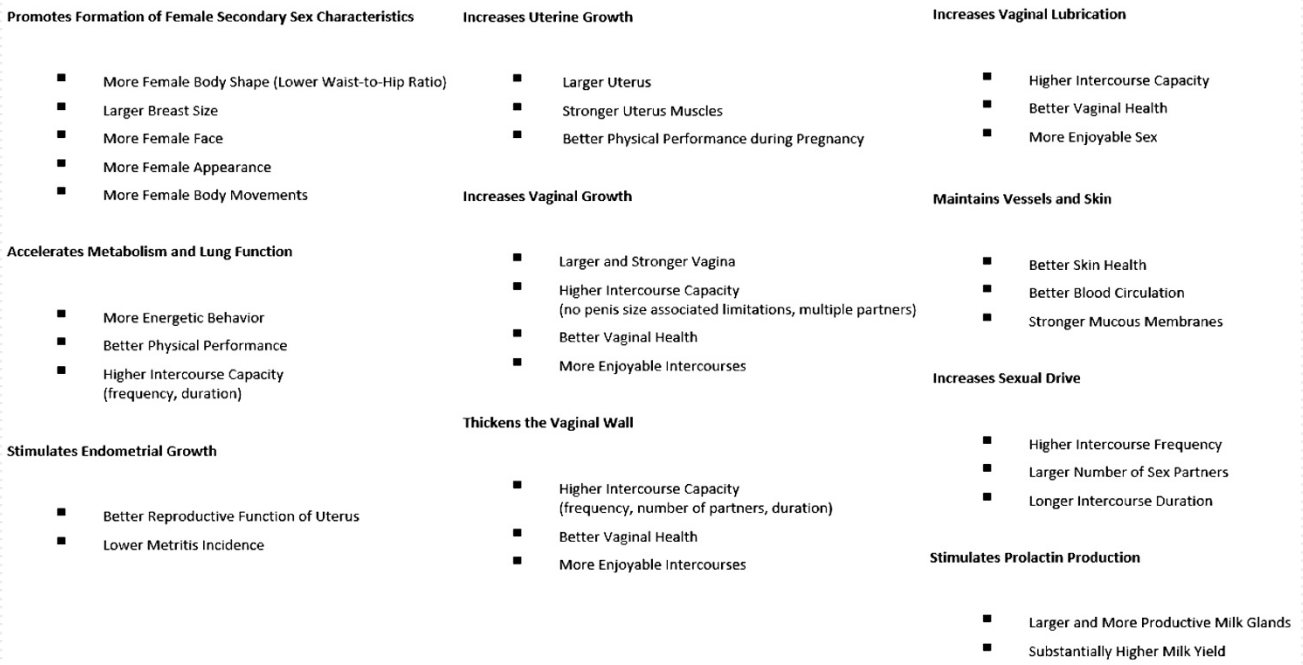


Fig. 26. The major sexual functions of the female sex hormone estrogen, with an overview of the associated reproductive advantages. The ovaries of women with the large U.S. Type of Breasts produce significantly more estrogen than the ovaries of women with smaller breasts. The high estrogen level of women with the U.S. Type of Breasts is associated with an improved reproductive and sexual capacity of women with this type of breasts.

The high levels of the sex hormone estrogen in women with the U.S: Type of Breasts have a significant impact on their sexual behavior and expectations as consumers. Therefore, the high prevalence of this breast type among Caucasian U.S. women should be considered also in the development of other than directly breast related products for female consumers in the U.S. market.

Not all the effects of the higher sex hormone levels do fall within the scope of this article, and the effects of sex-hormones have countless interfaces to product development, so the discussion of the commercial relevance of them is in this context limited to a brief presentation a few of the most noteworthy needs of market-specific product adaption.

Most obviously, the increased sexual capacity of women with the U.S. Type of Breasts needs to be considered in the development of market adapted personal products directly associated with sexual activities:

-***Personal sex devises*** for North American women must have a more robust construction, higher engine power and more powerful vibrator units than devices sold in other geographic areas. The devices must be durable enough to stand out frequent use in long-lasting sessions. Also, they need to be quick to clean with minimal downtime. In specific, floor-standing sex devices must have high enough torque to be able to lever forcefully in both horizontal and vertical directions. Further, the engine compartment of floor-standing devices must have an adequate ventilation or cooling system and sound insulation. The floor-facing parts of the devices must also have prober suspension and vibration dampers to reduce the disturbance caused by intensive and frequent use in apartments and shared flats.

-***Condoms*** for North American market must be made of more durable materials than in other markets as the high estrogen levels of the women with the U.S. Type of Breasts are associated with longer lasting and more intensive sexual

intercourses. Condoms for men need to be made thicker and have inside lubricant to delay ejaculation. They should also preferably have a rigid and protruding outside texture to maximize the stimulation of the woman during intercourse as women with high estrogen levels have also a larger vagina, stronger vaginal muscles and less sensible vaginal walls than other women. Typically, they are also more sexually experienced than women with lower sex hormone levels.

-***Female condoms*** for North American market need to me made of very durable materials as women with the U.S. Type of Breasts have longer intercourses as well as simultaneous and serial intercourses with several men at the same occasion much more frequently than women with any other types of breasts. In the U.S.A. women are using only the improved second generation of the female condom ("FC2") as it offers interruption-free intimacy and as it is the only female condom in the world that meets the U.S. quality standards set by the U.S. Food and Drugs Administration ("FDA"). Concerning new product entries, it is highly recommendable that any female condoms for the North America need to be made durable enough for serial intercourses with men wearing male condoms as well as long lasting intercourses using powerful floor-standing sex devices. Female condoms must also have larger internal and external rings than in other markets.

-***Beds and mattresses*** must be made with a high-quality construction. The materials and construction of the bedroom furniture must be robust and tolerate intensive sexual activities at daily basis. The beds for all sexually mature age groups need to be very tolerable. Even single beds for the U.S. market need to be constructed to withstand the weight of a woman and several men during an intensive intercourse. It is well known that shorter than expected lifespan of furniture generates easily customer dissatisfaction and even formal complaints referring to the consumer protection legislation.

BREAST SHAPE AND SEXUAL ATTRACTIVENESS

It has been frequently reported that men prefer women with firm and roundish breasts with a relatively high nipple location. The round shape and high nipple position of the U.S. Type of Breasts offer additional reproductive advantages to women with this breast type.

As early as in 1979 Symons predicted that firm breasts that point slightly up and out with small areola would be more attractive because they are associated with high reproductive value.

In their study of attractiveness based on body and facial traits of nude female photographs, Grammar et al. (2002) found significant positive correlations between breast size and attractiveness. Principal components factor analysis for 36 traits predicted to be associated with attractiveness showed that there was high positive loading of breast size and angle of nipple axis.

Mannin et al. concluded 1997 that breast symmetry appears to be positively associated with number of offspring and lower age at first reproduction. Only

women with high phenotypic quality can produce large symmetrical breasts.
The U.S. Type of Breasts are very symmetric in comparison to other breast types, so women with this breast type provide clear signals of high phenotypic quality.

As the U.S. Type of Breasts are not only very large, but they also have the shape, consistency and the nipple position perceived as optimal by men, it is not surprising that women with the U.S. Type of Breasts are commonly ranked highest by men looking for a potential partner. Women with the U.S. Type of Breasts get most male attention and are approached by men in fertile age much more frequently than women with any other type of breasts. Large, firm and spherical breasts are strongly associated with nobility.

The observations conserving the male attraction are logical in the light of the fact that the women with this breast type unquestionably have better developed Female Secondary Sex Characteristics than women with any other type of breasts. After all, the secondary sex characteristics are features that appear as signs of sexual maturity during puberty in humans to distinguish the sexes of the human species.
They are the product of sexual selection for traits which display fitness, giving an individual an advantage over its rivals in reproductive and aggressive interactions.

SOCIO-SEXUAL RANKING

Recently, a number of psychological studies have concluded that breast size is an important factor also for interaction between female individuals. A woman´s breast size correlates positively with both her sexual attractiveness, social prestige and high reproductive value.

In 2015 Barnaby J. D. et al. studied the role of breast size in perceptions of women's sexual attractiveness. The participants of the study (100 men and 100 women) rated images of female torsos modeled to vary in breast size. Sexual attractiveness ratings increased linearly with breast size. Ratings for perceived sexual maturity and nurturing ability also increased with breast size.

There were no significant sex differences in ratings of any of the perceptual measures. In other words, both men and women find large breasts to be sexually more attractive than smaller breasts.

The fact that, not only men, but also women with other breast types place women with the large breasts on the top of the sexual ranking and attractiveness scale, gives the women with the U.S. Type of Breasts a socially dominant position and the opportunity to choose quite freely their sex partners.

Women with other types of breasts tend to behave in a submissive way in social situations with women with the U.S. Type of Breasts. This conflict avoiding behavioral pattern has been shown to be applicable even when woman with the U.S. Type of Breasts chooses to have sex with another woman´s boyfriend. This behavior is quite unique from a socio-psychological perspective, and shows that the U.S. Type of Breasts are associated with a remarkably high social status in the socio-sexual hierarchy between female individuals. Fig. 27 and 28.

Further, in 2015 Raposio et al. asked 958 male study participants to rate the attractiveness of 5 breast sizes in frontal, ¾ and profile views of the head and torso of a faceless woman. Consistently, the bigger breast sizes obtained the highest attractiveness ratings. The results were in line with the previous studies showing the male preference for women with the U.S. Type of Breasts.

It has also been reported that women and teenage girls with the U.S. Type of Breasts have a higher number of sex partners and have sexual intercourses much more frequently than their peers with other types of breasts.

Fig. 27. Women and girls with U.S. Type of Breasts (middle) have a remarkably better self-confidence and body image than women with other types of breasts (left, right). The U.S. Type of Breasts are associated with a high status in the socio-sexual hierarchy between female individuals.

Further, it has been shown that women with the U.S. Type of Breasts are well aware of their high ranking in the mating hierarchy and they consciously use their advance to select more attractive partners and have more one-time sex intercourses than women with other breast types.

Women with the U.S. Type of Breasts have also been reported choose to have sexual intercourse with several men at the same time about 17 times more frequently than women with other breast types. This behavior is believed to be connected to their high attractiveness ranking and their positive body image as well as their relatively high levels of two major sex hormones, estrogen and testosterone.

In other words, the anatomical and physiological properties of women with the U.S. Type of Breasts give them a selection advantage they consciously use to maximize their personal sexual enjoyment by having sex often, with several partners and with the most attractive partners they have access to because of their high ranking in the sexual hierarchy.

SOCIO-PSYCHOLOGICAL INTERACTION WITH NON-U.S. TEENAGERS IN ADOLESCENCE AND EARLY ADULTHOOD

It has been shown that young women who come to the United States as exchange students have a very high incidence of mental problems related to their body image and self-esteem.

In-depth interviews of the affected exchange students have revealed that one of the key reasons for the problems is that they feel anxiety, when they realize that their breasts are substantially smaller in size than the breasts of their U.S. classmates. Such an unexpected observation is especially difficult for young female individuals to deal with, because their own sexuality and body image may still be quite fragile. They are already aware of the breasts role as an important secondary sexual characteristic of women, so they know that women with large breasts are more desirable by the opposite sex.

It has also been reported that differences in breast size have a significant mental health impact in adolescent girls, affecting self-esteem, emotional well-being and social functioning. It is therefore quite natural that foreign girls arriving in the USA need to go through a mental adaptation phase to figure out how the anatomical difference, that they suddenly face, impacts their social status and interaction with other people, in specific the opposite sex.

Even after an adaptive phase, the unexpected observation of the difference in the breast size has often a remarkable negative impact on the self-esteem of foreign females visiting the USA.

Fig. 28. Women with the U.S. Type of Breasts find themselves to be in a dominant position in relation to other women. Other women tend to behave in a submissive way in social situations with women with the U.S. Type of Breasts.

Apart from U.S. born Caucasian females, the presence of small breasts is rarely due to any significant anomaly, but can cause much anguish to non-U.S. teens and women. Small breast size is often associated with low self-esteem and even depression especially when there is a history of taunting, which is a common practice among teen girls.

The mental adaptation of non-US teenage girls visiting the USA is further complicated by the fact that U.S. teens are increasingly using derogative language refer to the breasts of non-U.S. women. This type of abusive language is today commonly used also by accomplished teenagers, especially Caucasian teen girls and young women. It has been suggested that the change may be driven by the increasing international travel experience of the U.S. teenagers as well as their widespread use of internet. Their awareness of the geographically based differences in the anatomy of the breast have increased over the years. Fig. 29.

Fig. 29. The mental adaptation of non-US teenage girls visiting the USA is further complicated by the fact that U.S. teens are increasingly using derogatory language referring to breasts of non-U.S. women.

The central role of social media and mobile communications further amplify the significance of external appearance in the communication. Selfie pictures are an integral part of teenager's online identity. People post selfies because they desire for likes or comments as a part of the natural need of peer approval. When a teenage girl or woman with the U.S. Type of Breasts posts selfies or mobile picture messages, she receives stronger peer approval than women with other types of breasts.

As social media is very rewarding for women with the U.S. Type of Breasts they also post selfies much more frequently than other women. Their selfies expose also more commonly the chest area than the selfies of other women. Fig. 30.

Fig. 30. Social media is very rewarding for women with the U.S. Type of Breasts. They also post selfies much more frequently than other women.

In particular, teenage girls with the U.S. Type of Breasts tend to expose their chest area, and even bare breasts in a boasting manner in social media and multimedia messages. By doing so, they demonstrate their sexual and social dominance. Sociologically, they force other girls in to socio-sexual submission in social media, i.e. virtually in the public forum. In this way, they show their supremacy in relation to girls and women with the other types of breasts Fig. 31.

Lately, also so-called comparative selfies have become an increasingly popular way to show dominance in social media. In the most typical form of comparative selfie one or several teenage girls take a photo of themselves posing next to a girl or woman who has a much less feminine body shape.

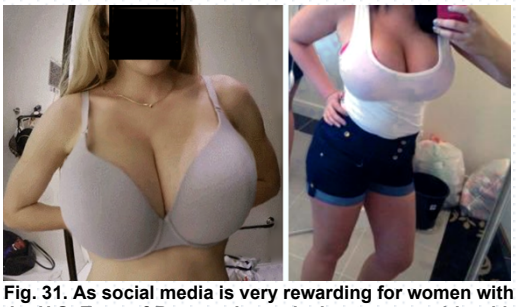


Fig. 31. As social media is very rewarding for women with the U.S. Type of Breasts. In particular, teenage girls with the U.S. Type of Breasts tend to expose their chest area, and even bare breasts, in a boasting manner in social media and multimedia messages. By doing so, they demonstrate their sexual and social dominance.

This kind of behavior may look harmless, but it is devastating for the self-esteem of the girl or woman who is included in the photo only as a negative reference to show the superiority of the more female girls. The phenome has been recognized as one of the questionable behaviors of US teenagers causing stress to foreign exchange students.

The concept of comparative selfies may even be considered a form of social harassment as the girls or women used as negative references have hardly ever any factual chance to decide whether she will be photographed or not.

Comparative selfies have a very strong negative impact on the self-confidence of girls and women portrayed as negative references, as they do not even have any effective practical ways to prohibit the wide-scale distribution of the photographs in social media.

There is no effective legal protection for the objectivized girls, as the situation is typically such that their peers have photographed them in a public place and there is no actual nudity in the photos. Accordingly, most comparative selfies are, from a legal point of view, only "descriptions of existing reality" in a public place. Nevertheless, regardless of the legality of the phenome comparative selfies cause mental stress in girls and women objectivized in them. Fig. 32.

Fig. 32. Lately, also so-called comparative selfies have become an increasingly popular way to show dominance in social media. In the most typical form of comparative selfie one or several teenage girls take a photo of themselves posing next to a girl or woman who has a clearly less feminine body shape and share it in social media.

Unfortunately, in social media the limits for the suitable language are even easier to forget than face to face. In specific teen girls with the U.S. Type of Breasts may too often be seen to make arrogant and derogative comments on the breasts of other women.

However, the phenomenon is not limited to teenagers. Recent studies of both online and workplace behaviors observed a similar trend among grown-up women. Also, adult women with the U.S. Type of Breasts women use commonly disparaging language, when they talk about women with small breasts. In comparison to teenagers, adult U.S. women are more diplomatic in face to face situations, but the way their mindset towards other women is reported to be increasingly complacent.

The socio-psychological significance of the U.S. Type of Breasts for group dynamics should be paid attention to always, when work teams, school classes, youth camp groups and the like are formed. It is often recommendable to give the team leadership roles to girls with the U.S. Type of Breasts to align the group dynamics with the natural psycho-social hierarchy of female individuals.

Further, it may not be advisable to place only a few non-U.S. girls in a large team of women with the U.S. Type of Breasts. This should be particularly avoided, if a team activity involves a change of clothing, an overnight stay, swimming or any other activities that force the team members to expose their body in the presence of the other team members.

If there is no way to avoid placing non-U.S. teen girls in a large team of U.S. girls at a youth camp, the camp supervisors should discuss the importance of acceptance of bodily differences already before the first night, and they should seek to supervise the behavior of the team members also at night to protect non-U.S. girls from becoming subjects to body-shape-related harassment.

As teenagers often ignore the boundaries of acceptable social behavior, all camp personnel must be trained to act on both verbal and physical abuse. Any comments made concerning breast size must be addressed immediately. Fig. 33.

It is important to be aware of that not only openly derogative, but any comments on breast size have a strong negative impact on the self-confidence and body image of girls with smaller breast size.

When Matsinger et al. studied the initial mental impacts of breast related comments in various groups of teenage girls, they concluded that the significance of breast related comments on the self-confidence of a girl depends more on who are present when comments are made than what is said. In his series of experimental settings one of the girls in each group was instructed to initiate a discussion about breasts with the comment *"I think most guys don't care much about the breast size of their dates. Or what do you think?"*

In each experimental group the very same initial comment was always made by one of the bustiest girls in the group, with exception of the groups that consisted only of girls with small breast size. The very same groups met every second week for a common team purpose (photo club, sports club, dance club and book club) in a series of meetings over an 8-month period. The girls' behavior, verbal responses and body language were carefully monitored during all the meetings.

Only the girls requested to initiate the breast discussion were aware about the ongoing experiment. The rest of the girls were continuously observed and interviewed by socio-psychologists at 4 separate occasions during the 8-month period.

The interviews were conducted under an excuse related to their hobby, but as a matter of fact the research team conducted an in-depth psychological evaluation of changes in the girls' self-confidence, body image and behavior in relation to other girls in the team.

They neglected their own needs. They started to look up to the girls with larger breast size than their own. At the same time the self-confidence and body image of the girls with large breasts was further strengthened. They were assertive, spoke clearly and made the decisions. Fig. 34.

Fig. 33. If non-U.S. teen girls must be placed in a large team of U.S. girls at a youth camp, the team should all the time be supervised to protect non-U.S. girls from body-shape-related harassment.

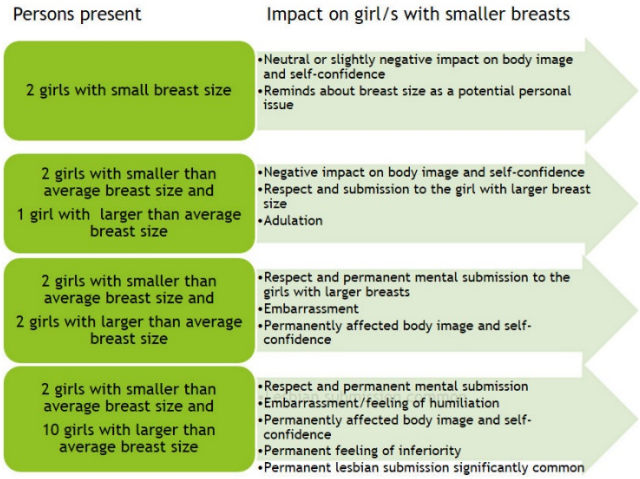

Persons present
Impact on girl/s with smaller breasts
2 girls with small breast size
•Neutral or slightly negative impact on body image and self-confidence
•Reminds about breast size as a potential personal issue
2 girls with smaller than average breast size and 1 girl with larger than average breast size
•Negative impact on body image and self-confidence
•Respect and submission to the girl with larger breast size
•Adulation
2 girls with smaller than average breast size and 2 girls with larger than average breast size
•Respect and permanent mental submission to the girls with larger breasts
•Embarrassment
•Permanently affected body image and self-confidence
2 girls with smaller than average breast size and 10 girls with larger than average breast size
•Respect and permanent mental submission
•Embarrassment/feeling of humiliation
•Permanently affected body image and self-confidence
•Permanent feeling of inferiority
•Permanent lesbian submission significantly common

Fig. 34. When Matsinger et al. studied the initial mental impact of breast related comments in various groups of teenage girls, they concluded that the significance of breast related comments on the self-confidence of a girl depends more on who are present when comments are made than what is actually said.

SOCIO-PSYCHOLOGICAL INTERACTION WITH ADULT NON-U.S. WOMEN

It is not only young girls and teenagers who are worried about their breast size. Adult women too are often unhappy about their small breasts and look for ways of enhancing them. Attitudes about breast size usually develop as a result of ongoing media presentations depicting large breasts as being attractive. Women with large breasts are also seen as being more desirable by the opposite sex.

Breast size is often associated with sexuality and attraction and therefore the belief arises that the size of breasts may affect one's social and interpersonal relationships. Virtually all the psycho-social studies conducted on self-esteem and body image have reported a strong positive correlation between a woman´s breast volume and her level of self-confidence.

In 1994 Young VL et al. interviewed women who underwent breast augmentation. Their average breast size increase was two bra sizes. Along with having a very positive body image, 88 % of the women reported heightened self-confidence and 95 percent said they felt better about themselves after surgery.

Women and girls with the U.S. Type of Breasts have a remarkable better self-confidence and body image than women with other types of breasts. The research results available are indicating that the basis of the relatively strong self-confidence of women with the U.S. Type of Breasts is multifactorial. Both socio-psychological dynamics and practical personal experiences have been shown to strengthen their self-confidence in relation to women with other type of breasts. Fig. 35.

Firstly, and most importantly, women with the U.S. Type of Breasts are aware of that they are perceived as more attractive sexual partners by men than women with other types of breasts.

Even prepubertal schoolgirls are reported to be aware of the male preference for girls with large breasts even.

In puberty and adulthood, the self-confidence of girls and women with the U.S. Type of Breasts is substantially strengthened by the apparent male preference for them.

Secondly, women with this breast type learn already in their teenage that not only men, but also women with other breast types place them on the top of the sexual ranking and attractiveness scale.

Media and education are also contributing to the positive self-image of women with the U.S. Type of Breasts, as they see that women with their breast type are perceived as the most attractive partners and virtually predominate the global entertainment business. Since 1950´s North American women have taken over the global entertainment industry at a constantly accelerating page.

Fig. 35. Women with the U.S. Type of Breasts (left and right) have a remarkable better self-confidence and body image than women with other types of breasts (middle).

Today, movies, TV shows, magazines and online media all over the world are visually dominated by Caucasian U.S. women, and in particular Caucasian U.S: women with the U.S. Type of Breasts. As TV productions have become increasingly demand-driven, U.S. produced TV shows with busty American actresses and TV journalists have largely replaced the locally produced shows in most countries of the world.

Since years, most of the globally admired idols, celebrities, actresses and other role models are U.S. women of Caucasian origin. Fig. 36 and 37.

Nowadays, women with the U.S. type of breasts collect also the revenues of the Internet based beauty and adult businesses. As an example, the global porn business – with annual revenues exceeding 100 billion – is dominated by U.S. based adult entertainment companies. Over 90% of pornography websites are U.S. based. It has been estimated that more than 99,6% of the global revenues of the porn industry are collected by U.S. based companies. In recent years, only the adult companies who have built their business on female models with the U.S. Type of Breasts have been successful. Obviously, no adult company is able to run a viable business without relying on women with the U.S. Type of Breasts. Non-U.S. companies were have lost the adult market to the global U.S. based companies.

This development is of importance in the social context too. Today´s teenagers become early exposed to pornographic materials. The exposure continues in the adulthood as well. In adult media, American teenage girls with the U.S. Type of Breasts see that their breast type is clearly the most desired breast type in the public sexual context too. Understandably, their observations contribute to make them sexually and bodily more self-confident than other women. Fig. 38.

Fig. 36 and 37 (above and above right). Movies, TV shows, magazines and online media all over the world are visually dominated by women with the U.S. Type of Breasts. Most of the globally admired idols, celebrities and other role models are busty U.S. women of Caucasian origin.

Practical personal experiences contributing to the strong self-confidence of women with the U.S. Type of Breasts can be divided to social experiences, sexual experiences and breast-feeding experiences.

Socially, they find themselves to be in a dominant position in relation to other women as women with other types of breasts tend to behave in a submissive way in social situations with women with the U.S. Type of Breasts.

Fig. 38. Media is also contributing to the self-confidence of women with the U.S. Type of Breasts. They see that women with their breast type dominate the global entertainment business.

Logically, women with the U.S. Type of Breasts are in general successful in both their private and business life. It has also been shown that they are wealthier already in the age of 26 years than women with other types of breasts.

Personal sexual experiences are also very significant promotors of the strong self-confidence of women with the U.S. Type of Breasts. Their anatomical phenotype and physiological properties give them a remarkable selection advantage, so they have a more satisfying sex life than other women.

Because of their high ranking in the sexual hierarchy, they have sexual intercourse much more frequently, and with a much larger number of partners, than women with other types of breasts.

Further, women with the U.S. Type of Breasts receive much more frequently spontaneous positive comments on their looks than women with other types of breasts. In sexual-sociological interview studies even comparative positive feed-back on their body from sex partners during sexual intercourse is commonly reported by women with this breast type. Spontaneous positive comparative feed-back means that a male partner tells his female sex partner during a sex act that her body looks more desirable or attractive than the body of his previous sex partner or current girlfriend.

When a woman with the U.S. Type of Breasts have first time sex with a new male partner close to 89 % of them say they received this type of spontaneous verbal comments from the new partner during the actual sexual intercourse. This kind of comparative feed-back has a major positive impact on the body-image and self-confidence of women with the U.S. Type of Breasts.

Also, breast-feeding experiences increase the female self-confidence of women with the U.S. Type of Breasts. Breast-feeding situations are very satisfactory for them as their milk yield is substantially higher than the milk yield of women with other types of breasts. In specific, milk pumping, and milk donation are reported to be satisfactory experiences as the U.S. Type of Breasts are highly productive and both the milk yield per pumping session and the duration of the lactation period are remarkably longer than for other breast types. Consequently, women with the U.S. Type of Breasts receive often admiring comments on their milk yield from other breast-feeding mothers and milk donation center personnel. The frequent positive comments in such a core area of the female reproduction as the breast milk production capacity strengthens further the self-confidence and sense of female superiority of women with the U.S. Type of Breasts. Fig. 40 and 41.

Mature women with the U.S. Type of Breasts find additional satisfaction in the fact that their breasts keep their shape and consistency also after multiple lactations. Their ego is boosted, as they find that their breasts remain significantly larger and firmer than the breasts of substantially younger, peak-lactating women with other types of breasts Fig. 39.

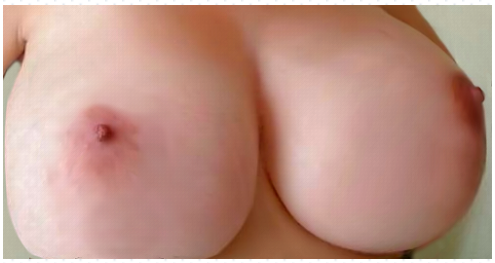


Fig. 39. Mature women with the U.S. Type of Breasts find additional satisfaction in the fact that their breasts keep their shape and consistency also after multiple lactations.

According to a recent large-scale socio-psychological poll, mature U.S. women above the age of 45 years remain very confident in the situations associated with partial or full nudity in social contexts, like hotel pools, locker rooms and sexual intercourse. They also report they still find themselves very attractive to men including young men belonging to the age group of 18 to 25 years of age.

Further, U.S. women report generally a very active sex life at the age of 45. At the same age, they also report they perceive that their peers with the other types of breasts have a more elderly life style than their own.

They also find their peers with non-U.S. breast types as sexually uncompetitive. They report that they feel themselves very confident when they meet their peers with other types of breasts and see how they have lost their breast volume resulting typically in a sagged breast shape.

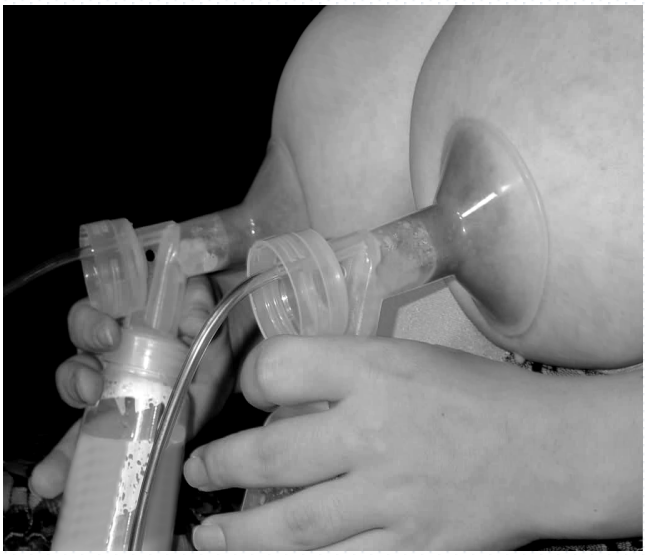


Fig. 40 and 41. Breast-feeding situations are very satisfactory for women with the U.S. Type of Breasts as their milk yield is substantially higher than the yield of women with other types of breasts. In specific, milk pumping, and milk donation are reported to be highly satisfactory experiences. The frequent positive comments in such a core area of the female reproduction as the breast milk production capacity strengthens the self-confidence and sense of female superiority of women with this breast type.

SUMMARY

The latest IBSS Standard update of 2013 recognizes the U.S. Type of Breasts as a distinguished breast type, which is commonly, and nearly exclusively, present in U.S. women of Caucasian origin.

Conventional bra labelling standards vary a lot between the countries and manufactures. In contrast, IBSS offers a globally comparable basis for product development and international trade. IBSS is widely used in various industries as it does not only define the volume of the breasts in an internationally comparable way, but also covers a number of shape, consistency and physiology related parameters.

The U.S. Type of Breasts differ anatomically and physiologically remarkably from the most frequent breast types of women born in other countries. The differentiating factors recognized are commonly called the U.S. Breast Characteristics.

In comparison to other breast types, the U.S. Type of Breasts are remarkably large and firm. As defined by IBSS the breast volume is larger than 1 200 ml.

The U.S. Type of Breasts also have a readily distinguishable hemispherical shape. The nipples point up from the horizontal level and they are commonly located above the horizontal center of mass.

Clinically, the U.S. Type of Breasts are easily recognizable without any advanced equipment, as an experienced medical practitioner can evaluate the four basic variables associated with this breast type quite reliably simply by means of visual examination and palpation of breasts; breast size, shape and consistency, as well as the nipple position can be estimated fairly reliably without any measuring devices. However, other more accurate methods are often needed for diagnostic purposes.

Radiologically, Caucasian U.S. women tend to have very dense breasts with remarkably high milk gland tissue content and rigid connective tissue structures. The U.S. Type of Breasts have an extremely high milk gland to fat ratio and, because of this, the radiological findings are consistent with very dense breasts.

Also for scientific and industrial purposes, such as product development in the lingerie industry, advanced imaging technologies are highly relevant, as also the tissue composition and lactation physiology of the U.S. Type of Breasts differ from the other types of breasts.

The large size and high gland tissue content of the U.S. Type of Breasts is beneficial for the lactation capacity and social status of U.S. women, but these variables are also associated with a few problems as well. U.S. women are often dissatisfied with the quality and sizing of foreign made apparel, particularly the lingerie products. Also, when U.S. women staying abroad turn to local health care, they face problems; abroad only a limited number of clinics have medical imaging devices suitable for proper examination of the U.S. Type of Breasts.

Microscopically, the U.S. Type of Breasts have remarkably high milk gland tissue content supported very rigid connective tissue structures. Highly productive, large milk glands fill out the whole volume of the breast. The dense gland tissue is arranged in 32 (20 - 38) very large breast gland lobes. Milk ducts are remarkably linear and even. Milk gland cells are large and highly active.

The U.S. Type of Breasts can produce remarkably large amounts of milk to feed infants. Large breast volume, high gland tissue content and highly active large gland cells are the major factors contributing to the high milk production capacity of this breast type. Well-structured massive breast gland lobes deliver an uninterrupted milk flow even when experimental breast pumps with vacuum levels as strong as 985 mmHg or even stronger are used.

For normal breast milk collection purposes hospital grade milk pumps or properly U.S. adapted personal milk pumps are the only advisable pumping device alternatives to be used by women with the U.S. Type of Breasts.

Although modern personal use breast pumps work well for women with other breast types, suction power, engine durability and tube dimensions of non-U.S. made personal breast pumps are not sufficient to meet the standards needed to milk the U.S. Type of Breasts in a meaningful way.

If breastfeeding women with the U.S. Type of Breasts use an efficient breast pump, they can virtually freely decide how much breastmilk they want to deliver for donation and how much time they prefer to use for personal free time activities and work. However, it is crucial to understand that although a woman with the U.S. Type of Breasts can during a single pumping session collect enough milk to cover the weekly nutritional needs a number of infants, this is not an approach to be recommended for other than milk donation purposes. A more frequent breast feeding is highly recommended for the development of a healthy maternal bond.

Breasts are the most obvious Female Secondary Sex Characteristic. A woman´s breast size correlates positively with both her sexual attractiveness and social prestige. Large, firm, spherical and symmetric breasts are strongly associated with nobility.

As the U.S. Type of Breasts are not only very large, but they also have the shape, consistency and nipple position perceived as optimal by men, women with this type of breasts get most male attention and are approached by men much more frequently than women with any other type of breasts.

The results of the recent studies confirm that women with the U.S. Type of Breasts are perceived as the most attractive sexual partners by men. Globally, as much as 95,6 % of ejaculations of men in fertile age take place while men are having sexual intercourse, or they are fantasizing of a sexual intercourse, with a Caucasian U.S. woman. Although the clear majority of the ejaculations happen in connection to masturbation using adult media or other visual material, the reported magnitude of the male preference for Caucasian U.S. women in sexual context is striking.

It is suggested that the U.S. Type of Breasts, together with a female body shape of U.S. women, are some of the key factors contributing to the remarkable global preference for U.S. women in the sexual and reproductive contexts. This seems plausible based on previous socio-sexual studies too.

Recently, several psychological studies have concluded that breast size is an important factor also for interaction between female individuals. A woman´s breast size correlates positively with both her sexual attractiveness and social prestige. Both men and women find large breasts sexually more attractive than smaller breasts.

Women with the other breast types tend to behave in a submissive way in social situations with women with the U.S. Type of Breasts. Undoubtedly, the U.S. Type of Breasts are associated with a remarkably high social status in the socio-sexual hierarchy between female individuals.

It has also been reported that women with the U.S. Type of Breasts have more sex partners and have sex much more frequently than women with other types of breasts. Women with this breast type have also been reported to have sexual intercourse with several men at the same time much more frequently than women with other breast types.

In-depth interviews of exchange students arriving in the USA have revealed that one of the key reasons for the problems is that they feel anxiety, when they realize that their breasts are substantially smaller in size than the breasts of their U.S. peers. Such an unexpected observation is especially difficult for young female individuals to deal with, because their own sexuality and body image may still be quite fragile. They are already aware of the breasts role as an important secondary sexual characteristic of women, so they know that women with large breasts are more desirable by the opposite sex. Fig. 42.

Fig. 42. In-depth interviews of exchange students arriving in the USA have revealed that one of the key reasons for the problems is that they feel anxiety, when they realize that their breasts are substantially smaller in size than the breasts of their U.S. peers.

Several studies have also concluded that differences in breast size have a significant mental health impact in adolescent girls, affecting self-esteem, emotional well-being and social functioning. The unexpected observation of the difference in the breast size has often a remarkable negative impact on the self-esteem of non-U.S. females visiting or staying in the USA.

The mental adaptation of non-US teenage girls visiting the USA is further complicated by the fact that U.S. teens are increasingly using derogative language refer to the breasts of non-U.S. women.

The central role of social media and mobile communications further amplify the significance of external appearance in the communication. When a teenage girl or woman with the U.S. Type of Breasts posts selfies or mobile picture messages, she receives stronger peer approval than women with other types of breasts.

Virtually all the psycho-social studies conducted on self-esteem and body image have reported a positive correlation between a woman´s breast volume and her level of self-confidence. Women and girls with the U.S. Type of Breasts have a remarkable better self-confidence and body image than women with other types of breasts.

The research results available are indicating that the basis of the relatively strong self-confidence of women with the U.S. Type of Breasts is multifactorial. Both socio-psychological dynamics and practical personal experiences have been shown to strengthen their self-confidence in relation to women with other type of breasts.

Media and education are also contributing to the positive self-image of women with the U.S. Type of Breasts, as they see that women with their breast type are perceived as the most attractive partners and virtually dominate the global entertainment business.

Practical personal experiences contributing to the strong self-confidence of women with the U.S. Type of Breasts can be divided to social experiences, sexual experiences and breast-feeding experiences.

Socially, women with the U.S. Type of Breasts find themselves to be in a dominant position also in relation to other women. Other women tend to behave in a submissive way in social situations with women with the U.S. Type of Breasts. Logically, women with the U.S. Type of Breasts are in general successful in both their private and business life. It has also been shown that they wealthier than women with other types of breasts.

Personal sexual experiences are also very significant promotors of the strong self-confidence of women with the U.S. Type of Breasts. Their anatomical phenotype and physiological properties give them a remarkable selection advantage, so they have a more satisfying sexual life than other women.

Further, women with the U.S. Type of Breasts receive much more frequently spontaneous positive comments on their looks than women with other types of breasts.

In addition, the breast-feeding experiences increase the female self-confidence of women with the U.S. Type of Breasts. Breast-feeding situations are very satisfactory for them as their milk yield is substantially higher than the milk yield of women with other types of breasts.

In specific, milk pumping, and milk donation are very satisfactory experiences as the U.S. Type of Breasts are highly productive and both the milk yield per pumping session and the duration of the lactation period are remarkably longer than in other breast types. The frequent positive comments in such a core area of the female reproduction as the breast milk production capacity strengthens the self-confidence and sense of female superiority of women with the U.S. Type of Breasts.

In conclusion, the U.S. Type of Breasts differ anatomically and physiologically remarkably from the most frequent Breast Types of women born in other countries. The U.S. Breast Characteristics need to be taken into account in a number of ways as well in the design of commercial personal products and services as in the field of medicine.

The inclusion of the U.S. Type of Breasts in the IBSS update of 2013 was of substantial value for the market adapted product development like design and dimensioning of garment, medical devices, breast pumps, vehicles, furniture, mattresses, massage tables, personal devices et cetera. Fig. 43.

Fig. 43. The U.S. Breast Characteristics need to be considered in the design of personal products and services as well as in the field of medicine. The inclusion of the U.S. Type of Breasts in the IBSS update of 2013 was of substantial value for the market adapted product development like design and dimensioning of garment, medical devices, breast pumps, furniture, mattresses, massage tables and personal devices.

Also, the socio-psychological significance of this breast type for group dynamics should be paid attention to always, when work teams, school classes, youth camp groups and the like are formed. It is often recommendable to give the team leadership roles to women with the U.S. Type of Breasts to align the group dynamics with the natural psycho-social hierarchy of female individuals as well as men´s sexually motivated endogenous respect for women with this type of breasts.

Further, it may not be advisable to place only a few non-U.S. women in a large team of women with the U.S. Type of Breasts. In particular, this should be avoided in case of non-U.S. teenage girls or young non-U.S. women or when a team activity involves a change of clothing, an overnight stay, swimming or any other activities that force the team members to expose their body in the presence of the other team members.

If there is no way to avoid placing non-U.S. teen girls in a large team of U.S. girls at a youth camp, the camp supervisor should discuss the importance of acceptance of bodily differences already before the first night, and she should seek to supervise the behavior of the team members also at night to protect non-U.S. girls from body-shape-related harassment. Fig. 44.

Fig. 44. It may not be advisable to place non-U.S. women in a large team of women with the U.S. Type of Breasts. In particular, this should be avoided in case of non-U.S. teenage girls or young non-U.S. women, and when a team activity involves a change of clothing, an overnight stay, swimming or any other activities that force the team members to expose their body in the presence of the other team members.

The need of breast type specific product adaption is most apparent concerning bras, garment, breast milk pumps and medical devices, but also adaptation of other types of personal devices, products and furniture is recommendable.

As an example, a typical U.S. woman needs a stabile bra that can withstand the kinetic forces generated by her breasts without damage to the fabrics or supportive structures. To meet her needs a bra needs to have strong stabilizing structures made of advanced durable materials and comfortable cup materials (microfiber, polyester-polyester copolymers or cotton).
In contrast, women with smaller breast types expect even their sports bra to be padded and affordable, so their needs can be met even by inexpensive bras with a simple sheer fabric construction made of materials like viscose or rayon.

The high estrogen levels of women with the U.S. Type of Breasts need also to be considered in the new product development. They have increased sexual drive as well stronger and larger genitals than women with any other breast type. Personal sex devices, massagers, bedroom furniture, condoms, tampons and other personal products sold in the U.S.A should be adequately adapted to the market conditions what comes to the constructional stability, material durability, dimensioning and engine power.

Proper market specific product optimization can improve both customer satisfaction and profitability globally. As not only the average characteristics of women´s breasts, but also the label sizing differ significantly between the markets, IBSS as an internationally comparable and reliable standard provides a valuable basis for truly global product optimization processes.

Firstly, both product dimensioning and design can be adjusted more reliably to the needs of the female population in each of the major markets. Secondly, the materials and the structural stability of personal products can be more properly adjusted to meet the needs of the female population in each of the major markets.

Understandably, an average Caucasian female customer in the U.S. market has quite different expectations concerning product dimensioning, material quality, durability, structural stability and, in case of many personal devices, also engine power than an average female customer in any other country.

Although the product optimization of a product intended for U.S. women is virtually always associated with the increased cost of goods sold (GoGS), the market specific product optimization increases the global profitability of a business through three major mechanisms:

Firstly, the customer satisfaction is improved. The frequency of product dimensioning (personal and medical devices) and sizing (garment) related reclamations decline in all markets. In the U.S. market, also the frequency of product quality, stability, durability and engine power (personal and medical devices) related reclamations declines.

Secondly, when U.S. women are satisfied with the quality of a brand, they buy it in much larger quantities, variations (colors, designs) and more frequently than they would do in case of a suboptimal product. This is a very significant sales booster as an average U.S. woman's purchasing power is 5 to 130 times higher than the purchasing power women in many other large countries. An average U.S. woman has a superior purchasing power also in comparison to women in any of the large European countries.

Thirdly, in most cases products intended to be used only by non-U.S. women can be made of cheaper materials without a significant impact on the customer satisfaction.

The use of inexpensive, light and simple structures in the non-U.S. markets cuts the CoGS radically and increases the global profitability of the product.

In summary, the need of breast type specific physical product adaption is most apparent concerning bra, swimwear, garment, breast milk pumps and medical devices, but also the market adaptation of other types of personal devices, products, furniture and vehicles is highly recommendable. An appropriate geographical adaptation of physical product dimensioning and design is one of the major positive drivers of customer satisfaction. In addition, the market-specific adaption of materials and product construction offers concrete ways to optimize the durability of products to the specific needs of each market.

Further, the socio-psychological significance of the U.S. Breast Characteristics for the group dynamics needs to be considered when new service products are developed. For example, spas, hotels and educational institutions with a significant portion of international guests can increase the comfort of their non-American female customers by adding the number of visual barriers in women´s locker rooms as well as public pool and beach areas.

The socio-psychological significance or breasts needs to be considered also whenever work groups or school teams are formed. It is recommendable to give the team leadership roles to women with the U.S. Type of Breasts to align the group dynamics with the natural psycho-social hierarchy of female individuals as well as men´s sexually motivated endogenous respect to women with large breast size. As women with the U.S. Type of Breasts have a phenotype based natural authority, they are well placed to act as leaders of any group of people. This should be considered in specific in global organizations Fig. 45.

It has been demonstrated that international voluntary teams lead by women with the U.S. Type of Breasts are typically better managed, more productive and have less conflicts than other teams as the formal leadership role is aligned with the natural social roles of team members.

There is reason to assume that the observations are valid also for all other types of international organizations: global businesses, international schools and any other social contexts with international participants. However, further research in this field is still needed to fully evaluate the business relevance of the observations in a scientifically unquestionable manner.

Fig. 45. The socio-psychological significance or breasts needs to be considered also whenever work groups or school teams are formed. It is often recommendable to give the team leadership roles to women with the U.S. Type of Breasts in order to align the group dynamics with the natural psycho-social hierarchy of female individuals as well as men´s sexually motivated endogenous respect to women with this type of breasts.

ANNEX I
U.S. TYPE OF BREASTS AS DEFINED BY IBSS (2013)

The U.S. Type of Breasts

Female Breasts expressing the Breast Characteristics Typical for U.S. Females (i.e. "North American Breast Characteristics" i.e. "American Breast Characteristics" i.e. "U.S. Breast Characteristics"):

1. Large Breast Volume

2. Firm Breast Tissue Consistency

3. Hemispherical Breast Shape

4. High placed and upwards pointing Nipples

Definition Details:

A Female Individual has by definition the U.S. Type of Breasts when her breast anatomy expresses all four Breast Characteristics typical for Caucasian U.S. women, (i.e. "the U.S. Breast Characteristics", i.e. "North American Breast Characteristics", i.e. "American Breast Characteristics", i.e. "U.S. Breast Characteristics"):

1. Large Breast Volume

The volume of the U.S. Type of Breasts exceeds 1 200 ml.

The volume of both left and right breast exceeds 1 200 ml. (In the U.S.A, the Expression the U.S. Type of Breasts is seldom used if the Breast Volume is less than 1 500 ml.)

A typical Caucasian woman (age 28 - 30 years) born in the U.S.A. has a breast volume of 1 668 ml and the highest quartile of Caucasian U.S. women has a mean breast volume as high as 2 986 ml.*

2. Firm Breast Tissue Consistency

The U.S. Type of Breasts are relatively firm in consistency when compared to international reference materials.

In most practical medical situations Breast Consistency is evaluated subjectively by a Medical Surgeon. Breasts of a typical U.S. Woman have relatively rigid and durable suspensory Ligaments which position her Breasts firmly high upon the Chest Wall and give the Breasts quite a rigid hemispherical Shape.

This is mostly related to the thick Ligament Structures and the relatively high Content of collagenous Fibers in the connective Tissue of Breast supporting Ligaments and Fascia of North American Women of Caucasian Origin. (There are also ongoing Studies indicating that Breasts of North American Females may have also a higher Glandular Tissue/Adipose Tissue Ratio than most other Women, but that remains to be confirmed.)

3. Hemispherical Breast Shape

The U.S. Type of Breasts have a Round, Hemispherical Shape.

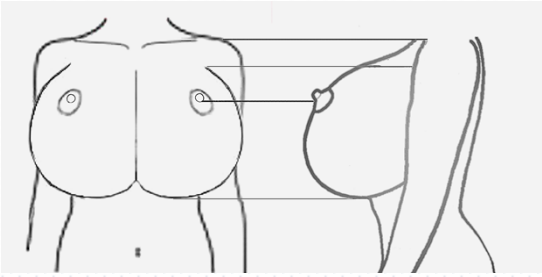
The rigid suspensory Ligaments of a Typical U.S. woman position her Breasts firmly high upon the Chest wall and give the Breasts a hemispherical Shape.

In the most Countries of the World the average Woman has "pear-shaped" Breasts. With the exception of the U.S.A, the most common Breast Shape in the highest Breast Volume Quartile is "hanging" or "hanging with wide tip i.e. saggy". In contrast, even the U.S. Women belonging to the highest Volume Quartile have most commonly hemispherical i.e. "round" Breasts.

4. High placed and upwards pointing Nipples

The nipples of the U.S. Type of Breasts are placed above the center of mass. The nipple axis is pointing up from the horizontal level with an angle of +5 to +72 degrees.

The Nipple of the Average U.S. Woman is pointing up with an Angle of 24 Degrees to the Horizontal and it is placed 3.84 cm above the Center of Gravity of her Breasts. Among Women in the other Countries the Nipple is on the Average placed 2.42 cm below the Center of Gravity and it makes an Angle of -14 Degrees to the Horizontal. The Differences in the Nipple Position are probably at least to a certain Degree linked to the Differences in the Average Shape and Ligament Structure of the Breasts in the different Countries.)



A Woman has the U.S. Type of Breasts, when her breasts express all four U.S. Breast Characteristics.

Additional Information:

Also, surgically enhanced Breasts that express all Four Breast Characteristics typical for Caucasian U.S. Women are to be defined as the U.S. Type of Breasts. However, it should be noted that based on established Practice U.S. Physicians continue to limit the use of the Expression to unenhanced i.e. natural Breasts.

In Practice, it should also be noted that unenhanced U.S. Type of Breasts are very rare among non-U.S. Women. In women not born in the United States of America the U.S. Type of Breasts are nearly exclusively present a Result of Breast Enlargement Surgery.

External Morphology of the U.S. Type of Breasts" reprinted on the permission of IBSS International Association.

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